

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
11 March 2004 (11.03.2004)

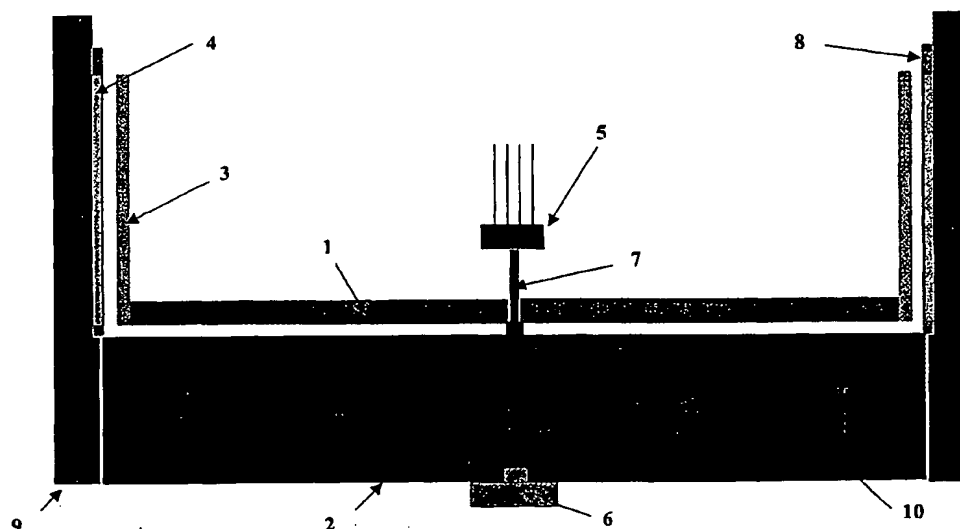
PCT

(10) International Publication Number
WO 2004/020942 A1

- (51) International Patent Classification⁷: **G01C 9/00**, 19/24, G01P 15/02, G01V 1/18, 7/00
- (21) International Application Number: **PC1/CH2003/000596**
- (22) International Filing Date: 2 September 2003 (02.09.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: PCT/CH02/00480
2 September 2002 (02.09.2002) CH
- (71) Applicant (for all designated States except US): **ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE (EPFL) [CH/CH]**; c/o Service des Relations Industrielles (SRI), CM-Ecublens, CH-1015 Lausanne (CH).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **MOSER, Roland [CH/CH]**; Tivoli 24, CH-1007 Lausanne (CH). **SANDTNER, Jan [CH/CH]**; Sonnenweg 10, CH-4436 Oberdorf (CH). **BARROT, François [FR/CH]**; Blancherie 5, CH-1022 Chavannes (CH).
- (74) Agent: **ROLAND, André**; Avenue Tissot 15, cp 1255, CH-1001 Lausanne (CH).
- (81) Designated States (national): AF, AG, AI, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: **DIAMAGNETIC LEVITATION SYSTEM**



(57) Abstract: The invention concerns an inertial sensor or an actuator based on diamagnetic levitation, said inertial sensor or actuator comprising support means serving as main support body for an inertial sensor or for an actuator, a two dimensional array of permanent magnets and a diamagnetic element facing the said array characterized in that said diamagnetic material constitutes the inertial mass or the moving part of the actuator.

WO 2004/020942 A1